



United States  
Department of  
Agriculture

Agricultural  
Marketing  
Service

Fruit and  
Vegetable  
Programs

Processed  
Products  
Branch

# Grading Manual for Frozen Mixed Vegetables

5-29

Action by: All Inspectors and Supervisors

: NOTE: For inspectors' use :  
: only. Not for :  
: public distribution :

## INSPECTORS' INSTRUCTIONS

for

FROZEN MIXED VEGETABLES

Approved by:

Processed Products Standardization and Inspection Division

Chief.

File with: United States Standards for Grades of Frozen Mixed Vegetables

## Handbook Control Record

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SEE FINAL PAGES OF THESE INSTRUCTIONS  
for the  
TABLE OF CONTENTS

Agriculture-Washington

Frozen  
Mixed Vegetables  
February, 1953

## I PURPOSE AND SCOPE

These instructions are intended to assist inspectors in the interpretations of the United States Standards for Grades of Frozen Mixed Vegetables and to act as a guide in inspection procedure.

These instructions are not intended to cover a combination of two vegetables, such as peas and carrots; the product of succotash, nor frozen mixed vegetables in which any basic vegetable was previously canned.

## II GENERAL

### A Assistance

Instances may be encountered when the inspector may wish to, and should, refer samples to his supervisor before rendering final judgment. It is believed, however, that if the inspector adheres closely to the instructions as outlined herein when inspecting frozen mixed vegetables more uniform decisions will result.

The inspector and supervisor must not deviate from the interpretations as described in these instructions without specific approval from the Washington office.

### B Caution

Since these instructions are of an administrative nature and are for inspectors' use only, they shall not be released in whole or in part to anyone outside of the inspection service. Interpretations may be explained and situations discussed, but the text for a given instruction shall not be given to the public or trade or other government inspection agency.

A Pack Statistics

The production of frozen mixed vegetables is relatively new in the frozen foods line and composite statistics are not readily available. Packs fluctuate by seasons and processing areas. Current indications are that frozen mixed vegetables are gaining in popularity.

B Source of Component Vegetables

The production of frozen vegetables is not confined to any specific area or standardized mixture of vegetables. Some packs of frozen mixed vegetables are a secondary operation to the freezing of other single vegetables. In many instances, the packs are made up in part by repacking to include frozen vegetables shipped in from other localities. In these instances, the final processor often specifies certain quality characteristics of the vegetable ingredient, such as the color of lima beans or the maturity of corn, in order to produce the desired grade in the product of frozen mixed vegetables. In some years when one of the component vegetables is in heavy demand as a single vegetable or is scarce because of adverse weather conditions, the item is often omitted from the mixed vegetable product.

C Processing

The initial preparation of each of the component vegetables is the same as though it were being prepared as a single vegetable. The length and extent of blanch may vary, however, in order to attain as much uniformity as possible in the composite mixture for the ultimate cooking time that may be specified for the product.

#### IV INSPECTION DURING PROCESSING

Good standards of sanitation must be maintained at plants that operate under either continuous inspection or other in-plant inspections. Any irregularities are reported as required or necessary. The following pertinent points to observe during the freezing or repacking of frozen mixed vegetables supplement general instructions and requirements for the individual vegetables or emphasize particular points to observe:

##### A Raw Material

- 1 Source of each component vegetable, including name of freezer, lot numbers, size of container or other information if prepared from previously packaged frozen vegetables.
- 2 Prevalence of defective units or any degrees of advanced maturity or fibrous character.
- 3 Use of any "soaked" dried lima beans or "soaked" dried peas.
- 4 Use of any kinds of vegetables not listed in the United States Standards for Grades of Frozen Mixed Vegetables.
- 5 Varietal types of lima beans or green beans, such as Fordhook limas or flat-type green beans, or other varietal differences as the case may be.

##### B Preparation and Workmanship

- 1 Effectiveness of removing defective units.
- 2 Method and uniformity of mixing, particularly if excessive amounts or negligible amounts of any single vegetable are admixed.
- 3 Any addition of previously frozen and packaged vegetable with the same kind of vegetable, either recently blanched or of a different varietal type.
- 4 Reblanching of any particular vegetable.
- 5 If previously frozen and packaged vegetables are used, observe the kind of packaging, previous storage temperatures or handling conditions, and interval between removal from freezing storage to time of mixing and repackaging.
- 6 Apparent quality or condition of previously packaged and frozen vegetables, such as dehydrated appearance of lima beans, shriveled carrots, tenderness of corn, etc.
- 7 Estimate the proportions of the various vegetables in the mixture from samples chosen periodically from the filling line. This estimation may be made by ascertaining the percentage of one or two vegetables which appear to be in excess of the maximum or less than the minimum recommended proportion. This estimation may also be made by ascertaining from several samples the percentage of a different vegetable from each of the samples. For example, if the mixture consists of carrots, lima beans, and peas, ascertain the percentage of carrots in one package, the percentage of lima beans in the next sample, and the percentage of peas in another. This estimation (or "line check") is not to be confused with compositing of samples for final inspection.

V INSPECTION OF THE FROZEN PRODUCT

A Kind of Equipment and Supplies

The following list comprises the kind of equipment and supplies needed in the inspection of frozen mixed vegetables:

- 1 Scale and pan - gradations of 1/4 ounces.
- 2 Balance - in gradations of .1 grams.  
(Desirable for ascertaining proportions on individual packages for "line-checks" as in continuous inspection or in-plant inspection and for certain defects).
- 3 Trays - White shallow laboratory trays for retail-size packages.
- 4 Trays - White, deep, large size laboratory trays for segregating and compositing each basic vegetable or for large-size packages.
- 5 NaCl (Sodium Chloride) for making salt solutions.
- 6 250 ml. beakers for flotation test on peas.
- 7 Tea strainer for straining peas during flotation test.
- 8 Salometer.
- 9 A folder containing --  
Inspectors' Instructions, any supplemental instructions, and United States Standards and Federal Specifications of the applicable issues for all of the following products:
  - Frozen Mixed Vegetables
  - Frozen Lima Beans
  - Frozen Snap Beans (Green and Wax Beans)
  - Frozen Diced Carrots
  - Frozen Whole Kernel (or Whole-Grain) Corn
  - Frozen Peas
- 10 Sampling supplies, such as --
  - Sampling certificate forms;
  - Stamps, stickers, or other marking devices for identifying or marking lots sampled;
  - Marking crayons.
- 11 Inspection papers, such as --
  - Applicant's information;
  - Contract instructions;
  - Score sheets and applicable work sheets for preparing certificates for typing.

V INSPECTION OF THE FROZEN PRODUCT (Cont.)

B Definition of Frozen Mixed Vegetables

The introductory paragraph in the United States Standards for Grades of Frozen Vegetables, specifically covers three or more succulent vegetables.

These grade-standards do not cover the following:

- 1 A combination of two vegetables, such as frozen diced carrots and peas;
- 2 A mixture containing any basic vegetable that has been previously canned, such as canned whole-kernel corn;
- 3 A mixture containing dried lima beans or dried peas, whether or not prepared by soaking.

Small pieces of sweet red peppers or sweet green peppers or similar vegetable materials (which may or may not have been previously canned) of a colorful and palatable nature may be added as garnish; okra or onions, for example, would not be considered suitable garnishing ingredients for a product of frozen mixed vegetables.

C Recommended Kinds and Styles of Basic Vegetables

All vegetables in the mixture other than small pieces of vegetables added for garnish are considered basic vegetables; therefore, throughout the United States Standards computations of percentages are made on the basic vegetables, exclusive of garnish. The basic vegetables, of the varietal types and styles as recommended in the United States Standards, are:

Green (or Wax) Beans  
Lima Beans  
Carrots  
Corn  
Peas

If any of the basic vegetables found upon inspection deviate from the varietal types and styles recommended, special certification is required (See section on Certification in these instructions).

-7-

V INSPECTION OF THE FROZEN PRODUCT (Cont.)

D. Recommended Proportions of Ingredients

The United States Standards outline the recommended proportions for frozen mixed vegetables containing three, four, or five basic vegetables. In the three-vegetable mixture, the minimum for any single vegetable is automatically 20 percent. In the four or five vegetable mixtures, the minimum for any single vegetable is 8 percent. These minimums together with the maximums recommended make various proportions possible, of which the following are examples:

Examples

3 vegetables (max. 40%)	40%	30%	30%	35%
	40%	30%	35%	25%
	20%	40%	35%	40%
4 vegetables (min. 8%) (max. 35%)	35%	30%	30%	35%
	35%	30%	30%	30%
	22%	32%	30%	25%
	8%	8%	10%	10%
5 vegetables (min. 8%) (max. 30%)	30%	25%	20%	30%
	30%	25%	20%	30%
	24%	25%	20%	20%
	8%	15%	20%	10%
	8%	10%	20%	10%

If any of the basic vegetables found upon inspection deviate from the minimum and maximum amounts for the number of vegetables in the mixture, special certification is required (See section on Certification in these instructions).

E. Inspection Procedure

As with other frozen vegetables, code or case markings, or both, kind of packaging, and net weights are carefully recorded on the score sheets. Before attempting to inspect frozen mixed vegetables, the inspector should familiarize himself with pertinent characteristics of the vegetables as outlined in the instructions and the United States Standards for each of the frozen vegetables in the mixture. Any instructions of a general nature that apply to frozen vegetables are normally applicable to the product of frozen mixed vegetables.



-8-

The following specific steps are followed in ascertaining the grade and other related conditions:

1. Thaw each package of 16 ounces or less under warm running water in sealed containers or at room temperature preferably in unopened containers to permit handling of the vegetables as individual units. If containers are larger than 16 ounces, take a representative sub-sample of approximately 16 ounces to 20 ounces from each package and air thaw or place each sub-sample in a moisture-proof bag (such as polyethylene) and thaw under warm running water. This may be accomplished by dividing the contents of the entire package a sufficient number of times until the required size subsample is obtained. A Jones Riffles Sampler (size D) Fisher Catalogue NO 4-942 (\$80) will do a satisfactory job on IQF products. One incorporating the principles of this divider might be built locally more economically.
  - \*
  - \*
  - \*
  - \*
  - \*
2. Spread each sample of the thawed mixed vegetables fairly evenly on the grading trays for inspection as a mass and record the kind, style and size, and varietal characteristics as applicable for the basic vegetables in the mixture.
3. Observe and record any factors or conditions, such as, but not limited to:
  - a. Dissimilar varietal characteristics of any of the basic vegetables;
  - b. Kind and size of pieces of garnish, if present;
  - c. Abnormal texture or abnormal condition of any vegetable;
  - d. Abnormal odors upon opening package;
  - e. Any evidence of dehydration in any or all basic vegetables;
  - f. Any specks or dirt or other contaminants;
  - g. Make note of any frozen masses of individual vegetables, such as large chunks of frozen corn, for certification as to such condition if the condition is serious.
4. Set aside for further checking any individual samples that possess abnormal odors upon opening package.

\* indicates changes

Remove pages 9 & 10,  
dated February, 1953.

- 9 -

Frozen  
Mixed Vegetables  
May, 1954

V INSPECTION OF THE FROZEN PRODUCT (Cont.)

E Inspection Procedure (Cont.)

- 5 Ascertain the rating for the scoring factors in the following order:

Color

Absence of Defects

Character (prior to cooking)

- 6 Ascertain proportion of ingredients on a composite basis from all of the samples as outlined in the United States Standards and the guide in these instructions under the section "Ascertaining the Proportion of Ingredients."
- 7 Select at least two sub-samples of 8 ounces to 10 ounces each from the composite mixture to be cooked. Cook the samples in gently boiling water for 18 minutes from the time the cooking water reaches the boiling point. After cooking,
  - a Check the composite samples of the cooked mixed vegetables as a combination for tenderness and texture (character):
  - b Check the composite samples of the cooked mixed vegetables for flavor and odor,
- 8 Cook separately each of the individual samples previously set aside because of abnormal odors upon opening package and check each of the cooked samples for flavor and odor.

F Evaluation of Quality Factors

1 Similar varietal characteristics

A prerequisite to all three grades — Grade A (or Fancy), Grade B (or Extra Standard), and Grade C (or Standard) — is that each of the basic vegetables possesses similar varietal characteristics. Examples of failing to meet this requirement would be the presence in a single package of: Fordhook and Henderson-Bush (or other thin-seeded varieties) Lima beans; Sweet type peas and Early type peas; or Green and Wax beans. The containers which possess dissimilar characteristics for any basic vegetable should be recorded as to the facts for subsequent certification.

If the varietal characteristics of a basic vegetable differ from package to package, the difference should be recorded for certification. An example would be a single inspection of 8 packages of which 2 packages each contained lima beans of the Fordhook type and in the other 6 packages the lima beans were of the Henderson-Bush type.

Frozen  
Mixed Vegetables  
May, 1954

V INSPECTION OF THE FROZEN PRODUCT (Cont.)

F Evaluation of Quality Factors (Cont.)

2 Flavor and odor

Flavor and odor is ascertained after cooking. To be Grade A or Grade B, the cooked samples are required to have a "good flavor and odor." Every basic vegetable must have a good, characteristic normal flavor and odor and the mixture as a whole, including any garnish if present, must be free from any kind of objectionable flavors or objectionable odors.

In Grade C a "fairly good flavor and odor" is permitted. If any individual vegetable is lacking in good characteristic flavor, the samples are considered within this requirement provided the mixture as a whole, including any garnish if present, is free from any kind of objectionable flavors or objectionable odors. An example would be a poor flavor in the lima bean component, whereas in the cooked mixture, an abnormal flavor would not be detectable. Another example would be any garnish of a kind to impart a flavor to the product which would mask the normal flavors of any individual vegetable or of the vegetables as a mixture.

3 Color

The over-all general color of the mixed vegetables immediately after thawing is ascertained in relation to the brightness and characteristic color of the vegetables as a mass. If any individual vegetable or if the vegetables as a mixture are off-color for any reason the product is Substandard.

If lima beans are present in the mixture, their color hue is considered on a separate basis, according to the percentages of "green", lighter than "green", and "white" as these color terms are defined in the United States Standards for Grades of Frozen Mixed Vegetables.

Any slightly spotted or slightly discolored lima beans or peas, when present in any substantial amounts are considered under the over-all factor of color, whether or not some units may also be considered as defects.

V INSPECTION OF THE FROZEN PRODUCT (Cont.)

F Evaluation of Quality Factors (Cont.)

3 Color (Cont.)

a Grade A Color

In Grade A (or Fancy) none of the basic vegetables may be dull or characteristic of vegetables of advanced maturity or of improper blanching or freezing. Even varietal characteristics of a basic vegetable may be cause to consider the product as not complying with the brightness for a Grade A color. An example of this would be a predominance of green beans of such variety that their dull, grey-green color would diminish the over-all effect of brightness for the mixture.

Any garnish that is present need be only reasonably bright as would be expected in sweet peppers, for example, that had been previously brined or canned.

b Grade B Color

In Grade B (or Extra Standard), the combined basic vegetables as a mass and the individual basic vegetables need to be reasonably bright and characteristic of reasonably young or reasonably tender vegetables that have been properly prepared and processed. This color requirement is intended to be the approximate equivalent to color that reflects Grade B character or maturity for the respective vegetables.

Any garnish that is present need be only fairly bright; that is, may be dull or lacking luster but not discolored, such as, a definite brownish cast in the case of red sweet peppers.

c Grade C Color

In Grade C (or Standard) considerable lee-way is permitted in the color factor, since the over-all color and the individual basic vegetables need be only fairly bright and characteristic of properly prepared and properly processed mixed vegetables. This does not permit any definite off-color of the mass or of any of the individual vegetables.

Any garnish that is present need be only fairly bright; that is, may be dull or lacking luster but not discolored, such as, a definite brownish cast in the case of red sweet peppers.

(SEE NEXT PAGE FOR SUMMARY OF COLOR REQUIREMENTS)

Frozen  
Mixed Vegetables  
May, 1954

V INSPECTION OF THE FROZEN PRODUCT (Cont.)

F Evaluation of Quality Factors (Cont.)

3 Color (Cont.)

d Summary of color requirements

		Lima Beans
Grade: All basic vegetables, including Lima beans	Thin-seeded (skins off)	Thick-seeded Type
Score: if present	Potato Type (skins on)	(Skins on)
"Good" — bright and	90% or more green;	85% or more green;
(A) characteristic of young	balance lighter or white	balance lighter; but
18-20: or tender vegetables	in combinations thereof	no more than 5% white
"Reasonably good" —		
reasonably bright, char-	65% or more green;	60% or more green;
(B) acteristic of reasonably	balance lighter or white	balance lighter; but
16-17: young or reasonably	or combinations thereof	no more than 5% white
tender vegetables		

Frozen mixed vegetables that fall into this classification shall not be graded above U. S. Grade B or U. S. Extra Standard, regardless of the total score.

"Fairly good" — fairly		
(C) bright, characteristic	More than 35% are	More than 40% are
14-15: of properly prepared and	lighter than green	lighter than green;
properly processed	including white	but no more than
vegetables		20% white

Frozen mixed vegetables that fall into this classification shall not be graded above U. S. Grade C or U. S. Standard, regardless of the total score.

4 Defects

Immediately after ascertaining the rating for color, segregate any defects or defective units into the following groups in accordance with the definitions outlined in the United States Standards:

a Harmless extraneous material

Ascertain from each container or sub-sample, the number of large pieces present and if heavy or excessively large, weigh the combined harmless extraneous material. The maximum allowances in terms of grams (based on 1/2% of net weight) for common retail-size containers up to 16 ounces is shown in the chart summarizing the defect allowances.

V INSPECTION OF THE FROZEN PRODUCT (Cont.)

F. Evaluation of Quality Factors (Cont.)

4 Defects

b Damaged units

Ascertain the degree to which slightly damaged, moderately damaged, and seriously damaged units, either singly or in combination affect the appearance or edibility, or both, of the mixture. Slightly damaged units, therefore, are considered as defects only when they, singly or in combination with any moderately damaged or seriously damaged units, affect the appearance or edibility of the mixture. In addition, segregate the moderately damaged units and the seriously damaged units which will be a determinant into which scoring classification the sample will fall.

In the category of moderately damaged units and seriously damaged units, references to such damage as "pathological" and "insect" injury have been purposely omitted in the standards. Damage by scars, pathological injury, or insect injury are scoreable in the category of "damaged by ... other means" or "damaged by ... other similar injury" provided such defects are not so serious as to be considered, in whole or in part, as a filthy, putrid, or decomposed substance, or are otherwise unfit for food or inedible as a food. In other words, any defect singly or in combination that are of such nature that they may render the product as "Grade Not Certified" are not to be included in the percentage tolerances in the respective grade classifications.

c Other defects

Any other defects not specifically defined are scoreable on the basis of the degree to which the appearance of the mixture is affected. An example would be the presence of carrot units which were predominantly not of normal diced units, such as an abnormal amount of apparent screenings from the dicing operation in carrots. Another example would be the presence of more than an occasional unstemmed unit (but not tough and woody stem) of green beans in the mixture.

d Scoring defects

Because of the numerous possible variations in the defects that may be found in frozen vegetables, the score is assigned using the maximum allowances (shown in the summary which follows) as the floor for each applicable classification. The number of moderately or seriously damaged units permitted in packages of 10 ounce, 12 ounce, or 16 ounce size in Grade A, Grade B, and Grade C are also included for ready reference. As an example, in a 12 ounce package, if there are 9 moderately damaged and 3 seriously damaged units (Total of 12, including no more than 3 seriously damaged), and an insignificant amount of "other defects", the score would be 37 points. If, in addition, there is 1 small piece of harmless extraneous material, the score would be 36 points.

Remove pages 13 & 14,  
dated February, 1953

Frozen  
Mixed Vegetables  
May, 1954

e Summary of allowances for defects and defective units.

Grade and core	HARMLESS EXTRANEEOUS MATERIALS	TOTAL:	DAMAGED UNITS	OTHER DEFECTS
	Per 16 ozs. or per pkg. if less than 16 ozs.	Moderately and Seriously damaged	Limit on seriously damaged	Loose skins, loose seeds, crushed, ragged, broken; small irregular, etc.
	Maximum	Maximum	Maximum	
(A) 6-40	No large pieces; 1 small piece, Provided, no more than 1/2 by weight -- or 1.43 g. in 10 oz. pkg. 1.70 g. in 12 oz. pkg. 2.27 g. in 16 oz. pkg.	3 per 3 ozs. including ... 1 per 4 oz. -- or equivalent of -- Per Package 10 oz. pkg: 10 units incl ... 2 12 oz. pkg: 12 units incl ... 3 16 oz. pkg: 16 units incl ... 4	Do not affect more than slightly the appearance of product	
(B) 32-35	1 large piece; and 2 1/2 2 small pieces, Provided, no more than 1/2 by weight -- or 1.43 g. in 10 oz. pkg. 1.70 g. in 12 oz. pkg. 2.27 g. in 16 oz. pkg.	4 per 3 ozs. including ... 1 per 3 oz. -- or equivalent of -- Per Package 10 oz. pkg: 13 units incl ... 3 12 oz. pkg: 16 units incl ... 4 16 oz. pkg: 21 units incl ... 5	Do not affect materially the appearance of product	
Frozen mixed vegetables that fall into this classification shall not be graded above U. S. Grade B or U. S. Extra Standard, regardless of the total score				
(C) 28-31	1 large piece; and 2 Small pieces, Provided, no more than 1/2 by weight -- or 1.43 g. in 10 oz. pkg. 1.70 g. in 12 oz. pkg. 2.27 g. in 16 oz. pkg.	5 per 3 ozs. including ... 1 per 2 oz. -- or equivalent of -- Per Package 10 oz. pkg: 16 units incl ... 5 12 oz. pkg: 20 units incl ... 6 16 oz. pkg: 26 units incl ... 8	Do not affect seriously the appearance of product	
Frozen mixed vegetables that fall into this classification shall not be graded above U. S. Grade C or U. S. Standard, regardless of the total score				

## V INSPECTION OF THE FROZEN PRODUCT (Cont.)

F. Evaluation of Quality Factors (Cont.)5 Charactera Before cooking

Before cooking to ascertain the tenderness of the combined vegetables and to ascertain the flavor and odor, check each basic vegetable for compliance with the requirements outlined in the United States Standards for Grades of Frozen Mixed Vegetables and the other standards to which reference is made. As the vegetables are checked for character, they may be separated at the same time and assembled in trays (which have been previously weighed or tared) for purposes of ascertaining later the proportions of ingredients.

In arriving at the score for character of the mixed vegetables, allowances are made for some of the individual vegetables to be of a character or maturity in the next lower classification as outlined in the standards and the summary of requirements for character included in these instructions.

In a mixture containing peas, if all the basic vegetables (including peas) on an organoleptic basis are well within all the requirements for either Grade A or Grade B or Grade C, as the case may be, it is not necessary to test the peas by the brine flotation method. If the peas, however, are near the minimum requirements for either Grade A or Grade B or Grade C, as the case may be, test the degree of tenderness or maturity of the peas by the brine flotation method as outlined in the United States Standards for Grades of Frozen Peas.

b After cooking

Check each of the cooked samples as a combination for degree of tenderness or toughness. If many of the individual vegetables prior to cooking were at the minimum limits in the next lower classification, the combined mixed vegetables after cooking may not be "tender" or "reasonably tender," as the case may be. In judging frozen mixed vegetables for character, the tenderness after cooking may be the final determinant in assigning the score.



Remove pages 15 & 16  
dated February, 1953

Frozen  
Mixed Vegetables  
May, 1954

c Summary of requirements for character

Frozen Mixed Vegetables		Individual vegetables prior to cooking (Based on applicable U. S. Standards for individual vegetables)	
Grade and Score	Combined vegetables after cooking (including garnish)	BEANS Green or Wax	PEAS
(A) 36-40	Must be tender	BEANS Idaho	CORN
		: Green or light	: No more advanced than cream-stage
		: Pods and seeds possess	: Reasonably tender and equal to score of 34 points
		: "Good character"	: (or middle B maturity) or higher
		: (or A character)	: (or A texture) or higher
		: Reasonably tender (or A or B tenderness)	
(B) 32-35	Must be reasonably tender and practically free from tough fibers	: All limas including white limas are reasonably tender (or B tenderness)	: Reasonably tender and equal to score of 32 points (or minimum B maturity) or higher
		: Pods and seeds possess	
		: "Reasonably good character"	
		: (or B character)	
		: (or B tenderness)	
		: (or C tenderness)	
		: (or C character)	
(C) 28-31	Must be fairly tender and reasonably free from tough fibers	: All limas are fairly tender (or C tenderness)	: Fairly tender (or C maturity)
		: Pods and seeds possess	
		: "Fairly good character"	
		: (or C character)	
		: (or C tenderness)	
		: (or C character)	

Frozen mixed vegetables that fall into this classification shall not be graded above U. S. Grade B or U. S. Extra Standard, regardless of total score

Frozen mixed vegetables that fall into this classification shall not be graded above U. S. Grade C or U. S. Standard, regardless of total score

V INSPECTION OF THE FROZEN PRODUCT (Cont.)

G Ascertaining the Proportion of Ingredients

1 Samples for compositing

The individual vegetables from each of the containers or sub-samples to be composited are separated and assembled in accordance with the explanation for this procedure outlined in the United States Standards for Grades of Frozen Mixed Vegetables. As mentioned previously, samples which possessed off-odors upon opening the container are not composited in ascertaining the proportion of ingredients.

When there are many samples in a single inspection, the samples may be grouped approximately 6 at a time for ease of handling. The aggregate weight of each vegetable is recorded for each group; the weight from each group is totaled; and the percentages calculated from the grand total. The following example covers 18-12 ounce packages from a single inspection which were composited in three groups:

	<u>Group of 6</u>	<u>Group of 6</u>	<u>Group of 6</u>	<u>Total of Each</u>
Beans	19 ozs.	15 ozs.	17 ozs.	51 ozs. 22%
Lima Beans	8 ozs.	10 ozs.	9 ozs.	27 ozs. 12%
Carrots	23 ozs.	18 ozs.	23 ozs.	64 ozs. 28%
Corn	11 ozs.	13 ozs.	12 ozs.	36 ozs. 16%
Peas	17 ozs.	18 ozs.	16 ozs.	51 ozs. 22%
Grand total . . . . .				229 ozs. (100%)

## VI CERTIFICATION

### A General

The certification or other reports on frozen mixed vegetables are in accordance with instructions that apply in general to all processed fruits and vegetables. The instructions contained in this section relating to certification are those which may differ or supplement such instructions as they apply to frozen mixed vegetables.

#### 1 Label statement

If the containers are labeled, show (in addition to pertinent information normally included on the certificate) the ingredients in the exact wording and order in which they appear on the label.

#### 2 Kinds and styles

If the vegetables are of the kinds and styles recommended in the United States Standards, certify in the body of the certificate in accordance with Examples 1 and 2.

##### Example 1

Ingredients:

Cut Green Beans (Round type) - approx. 3/4 to 1-1/4 inch cuts  
Lima Beans  
Diced Carrots  
Whole Kernel Golden Corn  
Sweet type peas

##### Example 2

Ingredients:

Cut Wax Beans (Round type) - approx. 1/2 to 1 inch cuts  
Diced Carrots  
Sweet type peas

VI CERTIFICATION (Cont.)

A General (Cont.)

3 Failure to comply with definition

If the product is alleged to be frozen mixed vegetables (either by label or other statement) but conflicts, either expressly or by implication, in some respects with the introductory paragraph in the United States Standards for Grades of Frozen Mixed Vegetables, certify on a descriptive basis. Show any pertinent facts in the body of the certificate and in connection with the "Grade" statements (See Examples 3 and 4).

Example 3 - (Product known by inspector to have been prepared in part from a canned or non-succulent vegetable but would meet quality requirements for either Grade A or B frozen mixed vegetables)

(in body of certificate)

Ingredients:

Lima Beans  
Diced Carrots  
Canned Whole-Kernel Golden Corn  
Sweet type peas

(in connection with Grade statement)

GRADE: No applicable U. S. Grade for this product.

Based on applicable factors outlined in the United States Standards for Grades of Frozen Mixed Vegetables, all vegetables (including canned corn not covered by the standards) meet requirements for U. S. GRADE B or U. S. EXTRA STANDARD.

Example 4 (Label statement or other evidence indicates a non-succulent vegetable used in mixture and quality of any or all vegetables would not meet quality requirements for either Grade A or B frozen mixed vegetables)

Ingredients:

Soaked Dried Lima Beans (see label statement above)  
Canned Diced Carrots (equivalent of U.S. Grade C Canned Carrots)  
Sweet type peas (equivalent of U. S. Grade B frozen peas)

GRADE: No applicable U. S. Grade for this product

(Mixture includes soaked dried lima beans and canned diced carrots not covered by the United States Standards for Grades of Frozen Mixed Vegetables).

VI CERTIFICATION (Cont.)

A General (Cont.)

4 Failure to meet recommended kinds and styles

If the frozen mixed vegetables do not meet the recommendations with respect to the kinds (including color or varietal types) and styles (including size or lengths), the product is certified as follows depending on whether each of the grading factors may be ascertained on the vegetables which deviate from the recommendations (See Examples 5 and 6):

- a When each of the grading factors may be ascertained, describe the kind and style of the ingredients and show failure to meet recommendations in connection with the "grade" statement.

Example 5

(in body of certificate)

Ingredients:

Cut Green Beans (Flat type), approx. 2 inch cuts  
Lima Beans  
Whole-Kernel "Shoe-peg" White Corn  
Early type peas

(in connection with Grade statement)

GRADE: U. S. GRADE B or U. S. EXTRA STANDARD, but product does not meet recommendations for kind and style of cut green beans and corn.

- b When some of the grading factors cannot be ascertained, describe the kind, style, quality of the ingredients which are deviations and certify as to no applicable U. S. Grade for the product.

Example 6

(in body of certificate)

Ingredients:

Lima Beans  
Diced Carrots  
Whole-kernel Golden Corn  
Soy-beans (Reasonably uniform green color; practically free from defects; reasonably tender)

GRADE: No applicable U. S. Grade for this product.

Based on applicable factors outlined in the United States Standards for Grades of Frozen Mixed Vegetables, all vegetables (except soy-beans not recommended in the standards) meet requirements for U. S. GRADE B or U. S. EXTRA STANDARD.

Remove pages 21 & 22  
 dated February, 1953

- 21 -

Frozen  
 Mixed Vegetables  
 May, 1954

## VI CERTIFICATION (Cont.)

A General (Cont.)5 Recommended proportions

If the frozen mixed vegetables meet the proportions recommended in the United States Standards, do not show the exact analysis as to percentage of ingredients on the certificate unless specifically requested. If the frozen mixed vegetables fail to meet the recommended proportions, do not show the exact analysis as to percentage of ingredients on the certificate unless specifically requested but show failure to meet recommendations and the reason in connection with the "grade" statement (See Example 7).

Example 7

GRADE: U. S. GRADE A or U. S. FANCY, but product does not meet recommended proportions of ingredients; diced carrots in excess of recommendations and less than 8% lima beans (based on composite sample).

B Grade Statements

The grade statements are similar to those for other frozen vegetables, except for the instances mentioned in these or subsequent instructions.

1 Dissimilar varietal characteristics

If, within a single container, any basic vegetable is not of similar varietal characteristics, such container is automatically Substandard. In officially drawn samples, if more than an occasional container is Substandard on account of dissimilar varietal characteristics of a basic vegetable (or vegetables), the lot as a whole is Substandard. Any differences as to the varietal differences are shown in the body of the certificate. (See Example 8 a)

Example 8 a

(in body of certificate, showing list of ingredients)

Cut Green Beans (Round type) - approx. 1 inch cuts

Lima beans (3 packages: Mixed Thin-seeded and Thick-seeded types)  
 (23 packages: Thick-seeded type)

Diced carrots . . . . .

Whole Kernel Golden Corn

Sweet Type peas

GRADE: 23 packages U. S. GRADE B or U. S. EXTRA STANDARD  
 Score - 81 to 87 points

3 packages SUBSTANDARD only account of dissimilar varietal characteristics of lima beans.

Lot as a whole: - SUBSTANDARD

VI CERTIFICATION (Cont.)

B Grade Statements (Cont.)

1 Dissimilar varietal characteristics (Cont.)

If, from package to package in a single inspection, a basic vegetable has different varietal characteristics, the differences are shown in the body of the certificate in connection with the statement of ingredients but the product is not graded SUBSTANDARD for that reason as is the case in Example 8 a.

(See Examples 8 b and 8 c)

Example 8 b

(in body of certificate, as one of the ingredients)

Beans (1 package: Cut wax beans, approx. 3/4 inch cuts)  
(8 packages: Cut green beans, approx. 1 inch cuts)

Example 8 c

(in body of certificate, as one of the ingredients)

Lima beans (2 cartons: Thick-seeded type)  
(6 cartons: Thin-seeded type)

2 Flavor and odor

If any of the cooked samples do not meet the requirements of "good flavor and odor" for Grade A or Grade B but they are satisfactory for Grade C (fairly good flavor and odor), certify as in Example 9. If some of the samples possessed off-odors upon opening the package and upon cooking the flavor and odor are still objectionable and thereby Substandard, certify as in Example 10.

Example 9

GRADE: U. S. GRADE C or U. S. STANDARD only account flavor and odor.  
Score - 82 to 86 points.

Example 10

GRADE: 6 packages U. S. GRADE A or U. S. FANCY  
Score - 91 to 94 points.

4 packages SUBSTANDARD on account of medicinal-like flavor.

3 Grade not certified

When the product is adulterated or contains filthy material or is not edible, the grade statement is "Grade Not Certified" in accordance with general instructions. Examples of such materials would be sand, dark specks or dirt, worm fragments (as in corn); very serious insect damaged green, wax, or lima beans, decayed portions of carrots; and harmful or inedible vegetable materials.

Frozen  
Mixed Vegetables  
May, 1954

INSPECTORS' INSTRUCTIONS  
for  
FROZEN MIXED VEGETABLES

I	PURPOSE AND SCOPE.....	Page 2:	4	Defects.....	Page 12
II	GENERAL .....	Page 2:	a	Harmless extraneous material.....	
A	Assistance.....	:	b	Damaged units.....	Pages 12-13
B	Caution.....	:	c	Other defects.....	Page 13
III	PRODUCTION AND PROCESSING ..	Page 3:	d	Scoring of defects.....	
A	Pack statistics.....	:	e	Summary of allowances for defects and defective units....	Page 14
B	Source of component vegetables.....	:	5	Character.....	Page 15
C	Processing.....	:	a	Before cooking.....	
IV	INSPECTION DURING PROCESSING	Page 4:	b	After cooking.....	
A	Raw material.....	:	c	Summary of requirements for character.....	Page 16
B	Preparation and workmanship.....	:	G	Ascertaining the proportion of ingredients.....	Page 17
V	INSPECTION OF THE FROZEN PRODUCT.....	Page 5:	VI	CERTIFICATION.....	Page 18
A	Kind of equipment and supplies.....	:	A	General.....	
B	Definition of frozen mixed vegetables.....	Page 6:	1	Label statement.....	
C	Recommended kinds and styles of basic vegetables.....	:	2	Kinds and styles.....	
D	Recommended proportions of ingredients.....	Page 7:	3	Failure to comply with definition.....	Page 19
E	Inspection procedure.....	Page 8:	4	Failure to meet recommended kinds and styles.....	Page 20
F	Evaluation of quality factors.....	Page 9:	5	Recommended proportions..	Page 21
1	Similar varietal characteristics.....	:	B	Grade statements.....	Page 21&22
2	Flavor and odor.....	Page 10:	1	Dissimilar characteristics.....	
3	Color.....	Page 10:	2	Flavor and odor.....	
a	Grade A color.....	Page 11:	3	Grade not certified.....	
b	Grade B color.....	:			
c	Grade C color.....	:			
d	Summary of color requirements.....	Page 12:			
				TABLE OF CONTENTS.....	Page 23

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